

REMARKS

Claims 1-8 were examined and reported in the Office Action. Claims 1-8 are rejected. Claims 1-8 remain.

Applicants request reconsideration of the application in view of the following remarks.

35 U.S.C. §102

It is asserted in the Office Action that claims 1-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,296,020 issued to McNeely et al ("McNeely"). Applicant respectfully traverses the aforementioned rejection for the following reasons.

According to MPEP §2131, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.' (Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). 'The identical invention must be shown in as complete detail as is contained in the ... claim.' (Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). The elements must be arranged as required by the claim, but this is not an ipsissimis verbis test, i.e., identity of terminology is not required. (In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990))."

Applicant's claim 1 contains the limitations of "[a] micro fluidic device capable of controlling a flow time of micro fluid by using a capillary phenomenon, comprising: a flow channel for flowing fluid, the flow channel being formed between a top substrate and a bottom substrate or between a top substrate, a bottom substrate, and a middle substrate; a flow blocking surface for stopping a flow of the fluid in the flow channel temporarily; and a hump for delaying the flow formed in the line of continuity with the flow blocking surface."

Applicant's claim 5 contains the limitations of "[a] micro fluidic device capable of controlling a flow time of micro fluid by using a capillary phenomenon, comprising: a first flow channel for flowing a first fluid and a second flow channel for flowing a second fluid, the first and second flow channels being formed between a top substrate and a bottom substrate or between a top substrate, a bottom substrate and a middle substrate; a first flow blocking surface and a second flow blocking surface, each connected to the first flow channel and the second flow channel; and a hump for delaying the flow, the hump being formed in a line of continuity with the first and second flow blocking surfaces."

McNeely discloses methods of controlling fluid flow through microchannels by using passive valves or stopping means in the microchannels. The passive valves act as pressure barriers impeding flow of solution past the stopping means until enough force is built up to overcome the force of the pressure barrier. (See McNeely, abstract). Applicant's claimed invention provides a micro fluidic device that can delay a flow of fluid for a predetermined time by using a simple principle and a simple structure. The micro fluidic device utilizes the capillary pressure to control the flow of the fluid.

Further, in Figure 1D and column 5, line 50 to col.6, line10, McNeely discloses the stopping means stops the flow until another flow operates as a mechanical pump (column 8, lines 20-24, column 10, lines 24-29), and that the aspect ratio is used for stopping the flow. Distinguishable, Applicant's claimed invention asserts that the hump that retards the flow without any external sources (see Applicant's specification, page 13, lines 16-19) and the aspect ratio are used to retard the flow. According to Applicant's claimed invention, the fluid stops by the hump for some time and spontaneously passes the hump without the operation of fluid pumping. In other words, McNeely fails to disclose the limitations of "a flow blocking surface for stopping a flow of the fluid in the flow channel temporarily; and a hump for delaying the flow formed in the line of continuity with the flow blocking surface" or "a first flow blocking surface and a second flow blocking surface, each connected to the first flow channel and the second flow channel; and a hump for delaying the flow, the hump being formed in a line of continuity with the first and second flow blocking surfaces."

Therefore, since McNeely does not disclose, teach or suggest all of Applicant's claims 1 and 5 limitations, Applicant respectfully asserts that a *prima facie* rejection under 35 U.S.C. § 102(b) has not been adequately set forth relative to McNeely. Thus, Applicant's claims 1 and 5 are not anticipated by McNeely. Additionally, the claims that depend directly or indirectly on claims 1 and 5, namely claims 1 – 4, and claims 6-8, respectively, are also not anticipated by McNeely for the above same reason.

Accordingly, withdrawal of the 35 U.S.C. §102 (b) rejections for claims 1-8 are respectfully requested.

CONCLUSION


In view of the foregoing, it is believed that all claims now pending, namely 1-8, patentably define the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees. If a telephone interview would expedite the prosecution of this Application, the Examiner is invited to contact the undersigned at (310) 207-3800.

Respectfully submitted,

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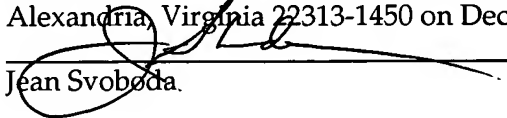
Dated: December 15, 2004

By: 
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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail with sufficient postage in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia 22313-1450 on December 15, 2004.


Jean Svoboda.